AMENDMENTS TO THE CLAIMS

Please cancel claims 1-20 and insert new claims 21-87 shown below. Since all claims are canceled and replaced with new claims, no marked and clean versions are herewith submitted.

21. A variable sensor, said variable sensor comprising:

a rigid support board, said board at least in part supporting

a sheet, said sheet positioned between said board and

a depressible resilient dome cap, said dome cap structured to provide, upon depression of said dome cap, a snap-through threshold tactile feedback to a human user.

22. A variable sensor according to claim 21 wherein said board is a circuit board supporting electrical circuit traces, and

said variable sensor is combined with means for variably controlling imagery according to variable depressive force applied by the human user.

23. A variable sensor according to claim 22 wherein said dome cap has a deformable surface having an apex located to contact said sheet.

24. A variable sensor according to claim 23 wherein said sheet supports electrically conductive material.

25. A variable sensor according to claim 24 wherein said conductive material is located to contact said circuit traces.

26. A variable sensor according to claim 25 wherein said circuit traces are interdigitated.

27. A variable sensor according to claim 25 wherein said imagery is an electronic game displayed by a television.

8 ~~28~~. A variable sensor according to claim ~~22~~ 2 wherein said variable sensor is positioned at least in part within a hand operated device, said device includes a first pivotally mounted button, said first pivotally mounted button positioned to be operated by a first human finger of the human user.

9 ~~29~~. A variable sensor according to claim ~~28~~ 8 wherein said device includes a second pivotally mounted button, said second pivotally mounted button positioned to be operated by a second human finger of the human user.

10 ~~30~~. A variable sensor according to claim ~~29~~ 9 wherein said device includes means for providing active tactile feedback.

11 ~~31~~. A variable sensor according to claim ~~30~~ 10 wherein said first pivotally mounted button is variably depressible to at least in part variably control said imagery.

12 ~~32~~. A variable sensor according to claim ~~31~~ 11 wherein said second pivotally mounted button is variably depressible to at least in part variably control said imagery, said imagery displayed by a television.

13 ~~33~~. A variable sensor according to claim ~~32~~ 12 wherein said variable sensor outputs signals representing On/off data and proportional data.

14 ~~34~~. A variable sensor according to claim ~~22~~ 2 wherein said variable sensor is positioned at least in part within a hand operated device, said hand operated device includes a right-hand area and a left-hand area, said variable sensor is located in said right-hand area, said imagery is an electronic game displayed by a television.

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15 ~~35~~. A variable sensor according to claim ~~34~~ 14 wherein said variable sensor is activated by depression of a thumb depressible button, said thumb depressible button located in said right-hand area and positioned to be depressed by a right hand thumb of the user.

16 ~~36~~. A variable sensor according to claim ~~35~~ 15 wherein said variable sensor outputs signals representing On/off data and proportional data.

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17 ~~37~~. A variable sensor according to claim ~~36~~ 16 wherein said hand operated device includes a second variable sensor located in said right-hand area.

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18 ~~38~~. A variable sensor according to claim ~~37~~ 17 wherein said hand operated device includes a third variable sensor and a fourth variable sensor, the second, third and fourth sensors associated with second, third and fourth independent buttons, the buttons located in said right-hand area positioned to be depressed by a right-hand thumb of the user.

19 ~~39~~. A variable sensor according to claim ~~21~~ 1 wherein electrically conductive material is carried by said dome cap, and said variable sensor is combined with means for variably controlling imagery according to variable depressive force applied by a human finger of the human user.

20 ~~40~~. A variable sensor according to claim ~~39~~ 19 wherein said conductive material has a deformable substantially convexed surface having an apex.

21 ~~41~~. A variable sensor according to claim ~~40~~ 20 wherein said variable sensor is structured in combination with means for providing active tactile feedback.

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22 ~~42~~. A variable sensor according to claim ~~21~~ 11 wherein said sheet is an electrically non-conductive sheet supporting electrically conductive material, and

said variable sensor is combined with means for variably controlling imagery according to variable depressive force applied by a human finger of the human user.

23 ~~43~~. A variable sensor according to claim ~~42~~ 22 wherein said conductive material contacts circuit traces.

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24 ~~44~~. A variable sensor according to claim ~~43~~ 23 wherein said circuit traces comprise a first circuit trace and a second circuit trace, said conductive material contacting between said first circuit trace and said second circuit trace.

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25 ~~45~~. A variable sensor according to claim ~~44~~ 24 wherein a four way rocker is located in said left-hand area of said housing.

26 ~~46~~. A variable sensor according to claim ~~45~~ 25 wherein said imagery is an electronic game displayed by a television.

27 ~~47~~. A variable sensor according to claim ~~44~~ 24 wherein said variable sensor is structured in combination with means for providing active tactile feedback.

28 ~~48~~. A variable sensor according to claim ~~47~~ 27 wherein said variable sensor outputs signals representing On/off data and proportional data.

29 ~~49~~. A variable sensor according to claim ~~47~~ 27 wherein said variable sensor is positioned at least in part within a hand-held housing, and said means for providing active tactile feedback is also at least in part within said housing.

30 ~~50~~. A variable sensor according to claim ~~49~~ 29 wherein said

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imagery is an electronic game displayed by a television.

31 ~~51~~. A variable sensor according to claim ~~50~~ 30 wherein a second variable sensor is positioned within said right-hand area of said housing, said second variable sensor actuated by variable depression of a second single individual button.

32 ~~52~~. A variable sensor according to claim ~~51~~ 31 wherein a four way rocker is located in said left-hand area of said housing.

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33 ~~53~~. A variable sensor according to claim ~~52~~ 32 wherein a third variable sensor is positioned within said right-hand area of said housing, said third variable sensor actuated by variable depression of a third single individual button, and a fourth variable sensor is positioned within said right-hand area of said housing, said fourth variable sensor actuated by variable depression of a fourth single individual button.

34 ~~54~~. A variable sensor operated by depression of a single button, said single button depressed by a finger of a user, said variable sensor combined with means for controlling game imagery, said variable sensor comprising:

sensor means for creating a proportional output, said proportional output representing varying depression applied by the finger of the user, said proportional output at least in part for controlling the game imagery,

B feedback means, at least for providing a snap-through threshold tactile feedback to the user.

35 ~~55~~. A variable sensor according to claim ~~54~~ 34 wherein said B feedback means further comprises means for active tactile feedback.

36 ~~56~~. A variable sensor according to claim ~~54~~ 34 wherein said sensor means includes a resilient dome cap depressible by said button.

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37 ~~57~~. A variable sensor according to claim ~~56~~ 36 wherein said feedback means comprises said dome cap supplying ~~a~~ said snap-through threshold tactile feedback through said button to the finger of the user.

38 ~~58~~. A variable sensor according to claim ~~57~~ 37 wherein said dome cap comprises rubber material.

39 ~~59~~. A variable sensor according to claim ~~57~~ 37 wherein said dome cap comprises metallic material.

40 ~~60~~. A variable sensor according to claim ~~57~~ 37 wherein said variable sensor is located in a two-hand operated device, and said sensor means includes a first proportional sensor activated by depression of said button, and a second proportional sensor activated by depression of a second button.

41 ~~61~~. A variable sensor according to claim ~~60~~ 40 wherein the buttons and the sensors are located in a right-hand area of said two-hand operated device.

42 ~~62~~. A variable sensor according to claim ~~61~~ 41 wherein the buttons are positioned for thumb depression.

43 ~~63~~. A variable sensor according to claim ~~62~~ 42 wherein said feedback means comprises means for active tactile feedback.

44 ~~64~~. A variable sensor combined with means for variably controlling electronic imagery according to variable depressive force applied to said variable sensor by only a single human finger, said variable sensor comprising:

a depressible resilient dome cap, said dome cap structured to provide, upon depression of said dome cap, a snap-through threshold tactile feedback to the human finger.

65. A variable sensor according to claim 64 wherein electrically conductive material is carried by said dome cap.

66. A variable sensor according to claim 65 wherein said conductive material deforms under said depressive force.

67. A variable sensor according to claim 66 wherein said variable sensor is located in a right-hand area of a housing, and a four way rocker is located in a left-hand area of said housing.

68. A variable sensor according to claim 66 wherein said variable sensor is structured in combination with means for providing active tactile feedback.

69. A variable sensor according to claim 66 wherein said variable sensor outputs signals representing On/off data and proportional data.

70. A variable sensor according to claim 69 wherein said variable sensor is structured in combination with means for providing active tactile feedback.

71. A variable sensor according to claim 70 wherein said variable sensor is activatable by depression of a button, said sensor and said button are positioned in a right-hand area of a housing, and a four way rocker is positioned in a left-hand area of said housing.

72. A variable sensor according to claim 71 wherein said electronic imagery is an electronic game displayed by a television.

73. A variable sensor according to claim 72 wherein said housing is hand-held, and said means for providing active tactile feedback is located within said housing.

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~~74.~~ A variable sensor according to claim ~~73~~ 53 wherein a second variable sensor is positioned within said housing, said second variable sensor actuated by variable depression of a second button, said second button located in said right-hand area of said housing.

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~~75.~~ A variable sensor according to claim ~~74~~ 54 wherein a third variable sensor is positioned within said housing, said third variable sensor actuated by variable depression of a third single individual button positioned in said right-hand area of said housing, and a fourth variable sensor is positioned within said housing, said fourth variable sensor actuated by variable depression of a fourth single individual button positioned in said right-hand area of said housing.

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~~76.~~ A method of using a variable pressure analog sensor, depressed by a human thumb, to control variable movement of imagery in an electronic game, said method including the steps:

a) decreasing pressure on said analog sensor, followed by

b) receiving a soft snap tactile feedback, followed by

c) increasing pressure on said analog sensor, said increasing pressure applied according to said imagery and substantially because of said receiving a soft snap tactile feedback.

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~~77.~~ A method according to claim ~~76~~ 56 wherein said variable movement of imagery is movement of a viewpoint through three-dimensional graphics.

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~~78.~~ A method according to claim ~~76~~ 56 wherein said variable movement of imagery is variable movement of a game object.

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~~79.~~ A method according to claim ~~78~~ 58 wherein said game object is a three-dimensional game object located within a three-

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dimensional graphics display.

~~80.~~ 60 A method according to claim ~~76~~ 56 wherein said variable movement of imagery is movement of a game character in three-dimensional graphics.

~~81.~~ 61 A method of using a variable sensor depressed by a human finger to variably control movement in an electronic game, said method including the steps:

a) depressing said ~~analog~~ variable sensor with varying pressure;

b) receiving a user discernable tactile feedback.

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82. A method according to claim 81 wherein said user discernable tactile feedback is a snap-through threshold tactile feedback.

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~~83.~~ 62 A method according to claim ~~82~~ 61 wherein said depressing includes depressing harder to make a controllable game character, of said electronic imagery, jump higher.

~~84.~~ 63 A method according to claim ~~82~~ 61 wherein said depressing includes increasing depressive pressure to make a simulated race car, of said electronic imagery, slow according to the increasing depressive pressure.

~~85.~~ 64 A method of variably controlling electronic imagery by using a variable sensor, said method including the steps:

a) pressing, with a human finger, a button associated with the variable sensor;

b) receiving, through said finger, a snap-through threshold tactile feedback.

~~86.~~ 65 A method of controlling electronic imagery according to claim ~~85~~ 64 wherein said pressing includes pressing harder to make a controllable game character, of said electronic imagery, jump higher.

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